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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,605	07/11/2003	Larry Pearlstein	HA-59APPCON	2905

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EXAMINER	
VO, TUNG T	

ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/617,605	PEARLSTEIN, LARRY	
	Examiner	Art Unit	
	Tung Vo	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/11/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 23-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over De With et al. (US 5,530,481) in view of Keesman et al. (US 5,805,224).

Based upon the interview dated 07/15/2008, the cited portion of De With did teach the claimed limitations as indicated in the interview summary. However, taking the entirely De With reference as a whole, De With still teaches the claimed limitation as follows.

Re claims 23 and 28, De With discloses a video processing device (fig. 2) for carrying out a video processing method comprising the steps of:

receiving encoded video data representing a series of images (2 and 30 of fig. 2; the demultiplexer receives the encoded video data), said encoded video data having been encoded using motion compensated prediction (19 or 32 of fig. 2, the same motion compensation is used in the encoder and decoder, see also fig. 2) on at least some of the images being encoded (14 of fig. 2), each encoded image in said series of images including

a first contiguous image area (B1-B9 of fig. 2, B(i,j) is block of the current image, see col. 5, lines 46-52) and a second contiguous image area (B1-B9 of fig. 2; col.3, lines 22-36),

each of said first and second contiguous image areas being smaller than a full area of an image in said series of images (3x3 blocks is a search area smaller than full area as a frame or image),

motion vectors (col. 3, lines 12-18, 50-67) for the first contiguous image areas using for predictions only pixels within first predetermined contiguous image areas (col. 3, lines 39-50),

said first contiguous image areas ***being located at the same location*** (col. 3, lines 45, lines 48, note a block Bpr(i,j) of the prediction image with the same coordinates (i,j) as the currently processed block B(i,j) of the current image; this disclosure obviously indicates that the first contiguous image areas being located at the same location as the series of images) in each of said series of images);

said same location having been determined prior to encoding (col. 3, lines 45-48); and

a decoder (30-36 of fig. 2) for decoding said received encoded video data.

It is noted that De With et al. does not particularly teach the predetermined contiguous image areas as claimed.

However, Keesman teaches the predetermined contiguous image areas (col. 1, lines 15-21) wherein the predetermined number of contiguous blocks (areas) are prior encoding (1 of fig. 1).

Therefore, taking the teachings of De With et al. and Keesman as a whole, it would have been obvious to one of ordinary skill in the art to modify the teachings of Keesman into the method of De With et al. to reduce actually the complexity of the conventional ones.

Re claims 24, 29, De With further discloses a display for displaying images corresponding to the decoded received encoded video data (fig. 4, Note FIG. 4 shows a scanning

sequence which has been found to be useful for video recorders because it yields an acceptable picture quality upon fast display, this suggests that the system inherently has a display).

Re claim 25, De With further discloses wherein the received encoded image data further includes motion vectors for the second contiguous image areas, the motion vectors for the second contiguous image area using for predictions only pixels within second contiguous image areas of said series of images (fig. 6C, col. 5, lines 1-10).

Re claim 26, De With further discloses wherein the encoded image data includes information identifying areas of the images in said series of images to which motion compensated prediction was separately applied (fig. 6B and 6C)

Re claim 27, De With further discloses wherein said at least one image is a frame (fig. 2).

Re claim 30, De With discloses a method (fig. 2) of processing video data comprising the steps of: receiving encoded video data representing a series of images (2 and 20 of fig. 2, Note demultiplexer receives a compressed or encoded signals that comprises a series of images or pictures), said encoded video data having been encoded using motion compensated prediction on at least some of the images being encoded (19 of fig. 2), each image including first and second contiguous image areas (figs. 6A-6D), said first and second image areas being in the same location in each image in the series of images (col. 3, lines 13-18), motion vectors (col. 3, lines 16-18) for the first image areas (fig. 6A) using for predictions only pixels of first image areas (col. 3, lines 29-38), encoded image data (14 of fig. 2, Noted coding a second image area based on the prediction) corresponding to a second image area of at least one of said images including insert image data (17 of fig. 2, Note image data is added to the encoded video data) that was

added to said encoded video data after initial encoding of said at least one of said images (16 and 17 of fig. 2); and decoding said received encoded video data (30-36 of fig. 2).

Re claim 31, De With further discloses displaying images corresponding to the decoded received encoded video data (fig. 4).

Re claim 32, De With further discloses wherein the encoded image data includes information identifying areas of the images in said series of images to which motion compensated predictions were separately applied (figs. 6A-6D).

Re claim 33, De With further discloses wherein each image in said series of images is a frame (fig. 2).

1. Claims 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xia et al. (US 6,014,466) in view of Zhu (US 5,757,668).

Re claim 34, Xia discloses a method of processing video data (fig. 11) comprising the steps of: receiving encoded video (MPEG-2 encoder for encoding first and second frame) data representing a second image that was encoded as a function of a first image (112 of fig. 11, see also fig. 12, Note encoding video signal based on frame to frame), the first and second images each including a first and a second non-overlapping image segments (104 of fig. 11, Note there each image is segmented into object; 62 and 64 of fig. 7, see also fig. 3), each of the first and second non-overlapping image segments including a plurality of vertically contiguous pixels (col. 1, lines 14-23), the first non-overlapping image segment (object 38 of fig. 3) occurring in the location in each of the first and second images (MPEG-2 encoding an image data based on the comparison of the first and second images, wherein the object 38 segment is the location in

both images by motion compensation (126 of fig. 12), Before the object can be encoded, its frame-to-frame motion must be compensated for (step 126 of fig. 12)), the location of said first non-overlapping image segment being determined (col. 4, lines 11-15, steps 62-76 of fig. 7, the determined location of said first non-overlapping (62-76) before encoding (78-83 of fig. 7)) prior to encoding of the first and second images (Frame to Frame motion compensation, 126 of fig. 12), said encoded video data representing the second image using as reference data from the first image, only image data (figs. 8 and 9) corresponding to the first image segment (fig. 5) of the first image (34 of fig. 3), for motion vectors (126 of fig. 12) representing a portion of the first image segment of the second image and using as reference data from the first image (126 and 128 of fig. 12), image data corresponding to the second image segment of the first image (col. 12, lines 34-43), for motion vectors representing a portion of the second image segment of the second image (126 of fig. 12); and decoding said received encoded video data (114 of fig. 11).

It is noted that Xia does not particularly teach the first non-overlapping image segment occurring in the same location in each of the first and second images as claimed.

However, Zhu teaches the first non-overlapping image segment (col. 5, lines 18-21, note a video frame to be encoded is first segmented into non-overlapping blocks) occurring in the same location in each of the first and second images *(col. 5, lines the matching error between the original block (ORIGINAL BLOCK of fig. 1) and the corresponding block in the reference frame (REFERENCE FRAME o fig. 1) at the same location).*

Taking the teachings of Xia and Zhu as a whole, it would have been obvious to one of ordinary skill in the art to modify the teachings of Zhu into the motion compensation of Xia to find the best match since it neither improves the coded picture quality nor reduces the bitrate.

Re claim 35, Xia further discloses displaying the decoded video data (118 of fig. 11)

Re claim 36, Xia further discloses wherein the received encoded video data representing the second image was also encoded as a function of a third image in addition to the first image, the received encoded video data using as reference data from the third image, only image data corresponding to a first image segment of the third image, for motion vectors representing a portion of the first image segment of the second image (fig. 12).

Re claim 37, Xia further discloses wherein said received encoded video data further uses as reference data from the third image, image data corresponding to the second image segment of the third image, for motion vectors representing a portion of the second image segment of the second image (MPEG-2 encoder, fig. 12)

Re claim 38, Xia further discloses wherein the first and second image regions of the second image represented by the received encoded image data were encoded using independent non-overlapping sets of reference data for motion compensated prediction purposes, said received encoded image data including information identifying each of the image segments which is independently encoded using motion compensated prediction techniques (114 of fig. 11)

Re claim 39, Xia further discloses wherein said first and second images are frames (frame to frame encoding, fig. 12).

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kondo (US 5,926,212) discloses image signal processing apparatus and recording/reproducing apparatus.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Wednesday, Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tung Vo/
Primary Examiner, Art Unit 2621